

REMARKS

Applicants request favorable reconsideration and allowance of the subject application in view of the preceding amendments and the following remarks.

Claims 1-35 and 40-60 are presented for consideration. Claims 1, 28, 40, 44, 51, 56 and 60 are independent. Claims 36-39 have been canceled without prejudice or disclaimer. Claims 28, 40, 44 and 50 have been amended to clarify features of the subject invention, while claims 51-60 have been added to recite additional features of the subject invention. Support for these changes and claims can be found in the original application, as filed. Therefore, no new matter has been added.

Applicants note with appreciation that claims 1-35 have been allowed over the art of record, and that claim 48 would allowed if rewritten in independent form. To expedite prosecution, claim 48 has been so rewritten as new independent claim 60. Therefore, Applicants submit that claims 1-35 and claim 60 should be deemed allowable at the outset. In addition to these claims being allowable, Applicants submit that independent claims 40, 44, 51 and 56 patentably define features of the subject invention. Therefore, Applicants request favorable reconsideration and withdrawal of the rejections set forth in the above-noted Office Action.

Claims 36, 40, 44, 49 and 50 were rejected under 35 U.S.C. § 102 as being anticipated by U.S. Patent No. 5,969,441 to Loopstra et al. Claims 37-39, 41-43 and 45-47 were rejected under 35 U.S.C. § 103 as being unpatentable the Loopstra et al. patent in view of U.S. Patent No. 6,271,606 to Hazelton. These rejections are respectfully traversed.

In one aspect of the invention, independent claim 40 recites a moving mechanism that includes a stage being movable two-dimensionally and a plurality of actuators having movable elements being movable two-dimensionally together with the stage and stators being independently movable in two dimensions by a reaction force produced in response to the driving of the stage. The plurality of actuators are disposed on opposite sides of the stage and each of the plurality of actuators is adapted to drive the movable element relative to the stator in the first and second directions.

In another aspect of the invention, independent claim 44 recites an exposure apparatus for exposing a substrate to an original. The apparatus includes an arrangement of a stage, a plurality of actuators, and stators, along the lines discussed above with respect to independent claim 40.

In yet another aspect of the invention, independent claim 51 recites a moving mechanism that includes a stage being movable in two dimensions and a plurality of actuators having moving elements being movable in two dimensions with the stage and stators being independently movable in two dimensions by a reaction force produced in response to the driving of the stage. Each of the plurality of actuators is adapted to drive the movable element relative to the stator in two directions.

In yet another aspect of the invention, independent claim 56 recites an exposure apparatus for exposing a substrate through an original. The apparatus includes an arrangement of a stage, a plurality of actuators and stators along the lines discussed above with respect to independent claim 51.

Applicants submit that the cited art does not teach or suggest such features of the present invention as recited in independent claims 40, 44, 51 and 56.

The Examiner relies on the Loopstra et al. patent for showing a moving mechanism that includes a stage movable in two dimensions and an actuator made up of a plurality of movable elements disposed on opposite sides of the stage with setters for driving the stage in two directions.

The Hazelton patent shows a linear-motor driven stage system in which a stator functions as a counter-measure mass to cancel a reaction force in a direction in which a movable portion is driven. In that patent, an actuator is arranged so that, by use of a reaction force produced when a movable element is moved linearly, a stator is moved in an opposite direction. This patent also discusses cancelling a force in a direction different from the driving direction of the movable element, at the stator side of the actuator.

Applicants submit, however, that the cited art, whether taken individually or in combination, does not teach or suggest at least the arrangement of a moving mechanism that includes a plurality of actuators having movable elements movable in two dimensions with a stage and stators being independently movable in two dimensions by a reaction force produced in response to the driving of the stage. Accordingly, the cited art does not teach or suggest the salient features of Applicants' present invention as recited in the above-noted independent claims.

For the reasons noted above, Applicant submits that the present invention, as recited in independent claims 40, 44, 51 and 56, also is patentably defined over the cited art.

Dependent claims 41-43, 45-50, 52-55 and 57-59 also should be deemed allowable, in their own right, for defining other patentable features of the present invention in addition to those recited in their respective independent claims. Further individual consideration of these dependent claims is requested.

Applicants submit that the instant application is in condition for allowance. Favorable reconsideration, withdrawal of the rejections set forth in the above-noted Office Action and an early Notice of Allowance are requested.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should be directed to our address listed below.

Respectfully submitted,



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